

WHAT IS CLAIMED IS:

1. A ratchet wrench, comprising:

a handle;

a drive head mounted on an end of the handle and having a first end formed with a receiving hole, a mediate portion formed with a receiving recess communicating with the receiving hole, and a second end formed with a receiving chamber communicating with the receiving recess;

a ratchet wheel mounted in the receiving hole of the drive head;

a pawl member pivotally mounted in the receiving recess of the drive head and engaged with the ratchet wheel;

a control knob rotatably mounted in the receiving chamber of the drive head and rested on the pawl member to push the pawl member to press the ratchet wheel, the control knob having an inside formed with a passage radially extended through the control knob; and

a substantially C-shaped limit spring mounted on the control knob to rotate with the control knob and having a mediate portion formed with a insertion portion inserted into the passage of the control knob and two distal ends each formed with an protruding locking portion that is movable to press the drive head to position the limit spring and the control knob on the drive head.

2. The ratchet wrench in accordance with claim 1, wherein the locking portion of one of the two distal ends of the limit spring is moved to

1 abut a connection of the receiving recess and the receiving chamber of the
2 drive head, and the locking portion of the other one of the two distal ends of the
3 limit spring is moved to press an inner edge of the receiving chamber of the
4 drive head to produce a locking effect on the control knob, so that the control
5 knob positioned in the receiving chamber of the drive head by the limit spring.

6 3. The ratchet wrench in accordance with claim 1, wherein the
7 locking portion of the limit spring is arc-shaped.

8 4. The ratchet wrench in accordance with claim 1, wherein the
9 locking portion of the limit spring is bent outward.

10 5. The ratchet wrench in accordance with claim 1, wherein the
11 control knob has a periphery formed with an annular snap groove, and the limit
12 spring is mounted in the snap groove of the control knob.

13 6. The ratchet wrench in accordance with claim 5, wherein the snap
14 groove of the control knob is located under and communicated with the
15 passage.

16 7. The ratchet wrench in accordance with claim 5, wherein the
17 control knob has a first end formed with a drive handle protruding outward
18 from the drive head and a second end formed with an enlarged resting plate
19 located adjacent to the snap groove and rested on the limit spring.

20 8. The ratchet wrench in accordance with claim 1, wherein the
21 insertion portion of the limit spring is substantially U-shaped.

1 9. The ratchet wrench in accordance with claim 1, further comprising
2 a positioning plate mounted in the passage of the control knob and having a
3 first end rested on the pawl member, and an urging spring mounted in a second
4 end of the positioning plate and urged between the positioning plate and the
5 drive head, so that the positioning plate is urged on the pawl member.

6 10. The ratchet wrench in accordance with claim 9, wherein the
7 positioning plate is substantially E-shaped.

8 11. The ratchet wrench in accordance with claim 9, wherein the
9 second end of the positioning plate is formed with two slits and a guide shaft
10 located between the two slits, and the urging spring is mounted on the guide
11 shaft and located between the two slits.

12 12. The ratchet wrench in accordance with claim 1, wherein the
13 positioning plate has a bottom rested on the insertion portion of the limit
14 spring.

15 13. The ratchet wrench in accordance with claim 1, wherein the
16 ratchet wheel is a substantially T-shaped socket.

17 14. The ratchet wrench in accordance with claim 1, wherein the
18 ratchet wheel has a bottom formed with an annular groove for fixing a
19 C-shaped snap ring which is rested on a bottom of the drive head to secure the
20 ratchet wheel on the drive head.

21 15. The ratchet wrench in accordance with claim 1, wherein the
22 ratchet wheel has a periphery formed with a plurality of ratchet teeth, the pawl

1 member has a first side formed with a plurality of engaging teeth engaged with
2 the ratchet teeth of the ratchet wheel and a second side formed with an arcuate
3 positioning edge, and the passage of the control knob is aligned with the
4 positioning edge of the pawl member.

5 16. The ratchet wrench in accordance with claim 1, wherein the
6 receiving chamber of the drive head has a wall formed with two spaced
7 arch-shaped locking recesses located adjacent to the handle, the control knob
8 has an inner side facing the pawl member, the limit spring is mounted on the
9 inner side of the control knob, and the locking portion of one of the two distal
10 ends of the limit spring is inserted into and locked in a respective one of the
11 two locking recesses of the drive head.

12 17. The ratchet wrench in accordance with claim 1, wherein the
13 receiving chamber of the drive head has a wall formed with an arch-shaped
14 locking recess located adjacent to the handle, the control knob has an inner side
15 facing the pawl member, the limit spring is mounted on the inner side of the
16 control knob, and the locking portion of either one of the two distal ends of the
17 limit spring is inserted into and locked in the locking recess of the drive head.